Trauma in Pregnancy

Introduction

- Trauma affects 8% of pregnancies
- Usual suspects: MVA, falls & assaults
- If maternal shock then 80% foetal mortality
- Best treatment for foetus is to treat the mother

Physiological changes

- ↑Bld vol, ↑CO, ↑HR, ↓BP, ↑RR, ↓FRC, ↓gastric emptying
- Supine hypotension syndrome (IVC venous return)
- Hypercoagulable state
- Uteropelvic blood flow

Anatomical changes

- Enlarged uterus
- Raised diaphragm
- Stretched peritoneum

Primary Survey

- Principles as for non-pregnant. Additionally, risk of aspiration and intubation failure, liberal use of O_2, careful chest drain placement, 15-30° Left lateral tilt (off IVC)

Foetal wellbeing

- Uterine tenderness/contractions
- PV Bleeding
- Foetal heart – fundoscope, USS
- CTG x 4-6hr if >24/40
- USS

Secondary survey

Includes an obstetric exam

Obstetric Problems

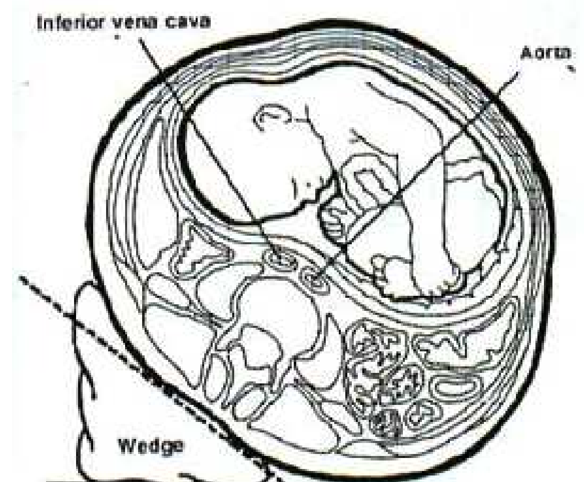
- Preterm labour
- Foetal distress
- Placental abruption – up to 5% minor & 50% major trauma, with ~30% foetal mortality
- Laceration of placenta or cord
- Uterine rupture
- Amniotic fluid embolism
- Direct foetal injury - rare

Investigations

- Additional bloods: βhCG, Rh status, Kleihauer-Betke test (For foetal RBC in maternal blood: fetomaternal haemorrhage in 10-30%, predicts preterm labour)
- Imaging: FAST,USS, XR/CT scan delivers ⅓rad to foetus, but apart from CT Abdo/Pelvis probably doesn't increase bkgd risk of 3% major birth defect & 15% miscarriage rate.

Management

- Left lateral tilt if >20/40
- O&G review ASAP
- Anti-D if Rh-ve
- Manage any injuries



Perimortem Caesarean Section

- Controversial
- Consider if >24wks, sudden maternal death/arrest & CPR<4-5mins or cardiac activity, and rapid delivery possible.
- Overall 50% live birth rate survival
- Neurological damage increases with time delay.